



# MATERIAL SAFETY DATA SHEET

JAN 15 1982

(Approved by U.S. Department of Labor "Essentially Similar" to Form LSB-OOS-4)

DPN 925  
*Acid, Acetic, Glacial*

PRODUCT NAME: ACETIC ACID, GLACIAL

CHEMICAL NAME: Acetic Acid

CHEMICAL FAMILY: Acids

FORMULA:  $\text{CH}_3\text{COOH}$ 

MOLECULAR WEIGHT: 60.05

SYNONYMS: Ethanoic Acid; Methane Carboxylic Acid

## I. PHYSICAL DATA

BOILING POINT, 760 mm. Hg	117.9 °C. (244.2 °F.)	FREEZING POINT	16.7 °C.
SPECIFIC GRAVITY ( $\text{H}_2\text{O} = 1$ )	1.0512 at 20/20 °C.	VAPOR PRESSURE AT 20 °C.	11 mm. Hg
VAPOR DENSITY (air = 1)	2.1	SOLUBILITY IN WATER, % by wt.	Complete
PER CENT VOLATILES BY VOLUME	100	EVAPORATION RATE (Butyl Acetate = 1)	0.97
APPEARANCE AND ODOR	Water-white liquid; sharp odor.		

## II. HAZARDOUS INGREDIENTS

MATERIAL	%	TLV (Units)
Acetic Acid	~ 100	10 ppm.
(See Sections III through VIII)		

## III. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT [test method(s)] 106 °F., Tag closed cup ASTM D 56

FLAMMABLE LIMITS IN AIR, % by volume	LOWER	5.4	UPPER	16.0
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EXTINGUISHING MEDIA

Use carbon dioxide or dry chemical for small fires.  
Use alcohol foam or water spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES

Fire fighting personnel should be cautious of irritating vapors that may be evolved from an acetic acid fire. Personnel should be protected by self-contained breathing apparatus and complete protective clothing as needed.

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

EMERGENCY PHONE NUMBER

304/744-3487

This number is available days, nights, weekends, and holidays.

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## HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	10 ppm. ACGIH (1977) OSHA CFR 29 § 1000 Table G1
EFFECTS OF OVEREXPOSURE	Contact with skin and eye causes burns. Breathing of vapors causes coughing, chest pain, and irritation of nose and throat. May cause nausea and vomiting.
EMERGENCY AND FIRST AID PROCEDURES	Immediately flush skin and eye contact with plenty of water for at least 15 minutes. Get medical care for eyes. If inhaled, remove to fresh air. Give oxygen if breathing is difficult. Call a physician.

## V. REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	None
UNSTABLE	STABLE		
--	✓		
INCOMPATIBILITY (materials to avoid)		Avoid contamination with alkalies, amines, and nitric acid.	
HAZARDOUS DECOMPOSITION PRODUCTS		Burning can produce carbon monoxide and/or carbon dioxide.	
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	None
May Occur	Will not Occur		
--	✓		

## VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Wear suitable protective equipment. Collect for disposal. See Section VIII. Toxic to fish! Avoid discharge to natural waters.
WASTE DISPOSAL METHOD	Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations. Some supplementary fuel may be required for burning.

## VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)		Fresh-air mask in confined areas		
VENTILATION	LOCAL EXHAUST	Preferable	SPECIAL --	
	MECHANICAL (general)	May not be sufficient	OTHER --	
PROTECTIVE GLOVES		Rubber gloves	EYE PROTECTION	Vapor-proof goggles
OTHER PROTECTIVE EQUIPMENT		Full face mask, impervious apron, eye bath, and safety shower		

## VIII. SPECIAL PRECAUTIONS

PRECAUTIONARY LABELING	<p>ACETIC ACID, GLACIAL</p> <p><b>DANGER!</b> CAUSES BURNS HARMFUL IF INHALED COMBUSTIBLE</p> <p>Do not get in eyes, on skin, on clothing. Avoid breathing vapor. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.</p> <p><b>FIRST AID:</b> In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.</p> <p>If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.</p> <p><b>FOR INDUSTRY USE ONLY</b></p>
OTHER HANDLING AND STORAGE CONDITIONS	<p>Waste streams containing acetic acid could be diluted and neutralized with caustic. The neutralized solutions containing sodium acetate salt should be amenable to biological degradation. Aqueous solutions containing 500 ppm. of sodium acetate have been degraded in acclimated laboratory biological systems.</p>